



**AMENDMENTS TO THE SPECIFICATION**

Please amend the paragraph beginning on line 16, page 1 of the specification as follows:

Chemical reactions releasing heat often take place at elevated temperatures and pressures in catalytic beds. The type of insulation used in corresponding reactors depends on the temperature inside the reactor and can be ~~build~~ built either of fibre materials or of several layers of castable materials varying in insulation ability and temperature ~~resistant~~ resistance. If castable materials are used, the outer layer will typically have very good properties for insulation, but on the expense of the temperature stability. Therefore, it is necessary to have inner layers with better temperature stability, but lower insulation abilities. Often the last inner layer consists of ceramic bricks with very high temperature stability. These can be made of alumina, zirconia or a mixture of these materials. If fibre materials are used there will typically only be one type, since these often ~~posses~~ poses good temperature stability and insulation properties at the same time.

Please amend the paragraph beginning on line 24, page 2 of the specification as follows:

This ~~minimises~~ minimizes or completely avoids the possibility of by-pass. Consequently, unintended reactions of feed gas by-passing the catalyst are avoided as well. An example is catalytic partial oxidation of a hydrocarbon feed, where bypass of the catalyst leads to thermal cracking instead of partial oxidation. The thermal cracking is furthermore ~~exothermal~~ exothermal.

**Please amend the paragraph beginning on line 29, page 3 of the specification as follows:**

Inside the reactor a metallic basket 3 is introduced containing a fixed bed of catalyst 4. This gas tight basket is fixed to the reactor shell at the inlet 6. The function of the metallic basket is to contain the fixed bed of catalyst and to prevent the feed gases to enter the insulation material. Thereby, by-pass of the fixed bed and unintended reactions outside the catalyst bed are prevented. The reacted gas leaves the fixed bed through a grid 5. There may be an additional flow channel connected with the metallic basket, but it is not required. After the gas leaves the gas tight basket, the reacted gas has access to penetrate into the insulation layers as the insulation inner surface 8 is porous. When the reactor is ~~pressurised~~ pressurized, this may happen and it is obtained that the portion of gas, which enters to the outside of the metallic basket, only consists of reacted gas. The gas leaves the reactor through the outlet 7.

**Please amend the paragraph beginning on line 15, page 4 of the specification as follows:**

[0013] The metallic basket is only dimensioned to withstand the weight of the fixed bed and the pressure difference created by having a flow through the fixed bed. Since the material of the metallic basket needs to be high-temperature resistance and inert towards undesired reactions, the material is often a much higher alloyed material than the material used for the above mentioned pressure shell, for example Inconel 600. Alternatively, the inner surface of the basket can be coated with a ceramic material such as alumina or zirconia. This means that to obtain the cheapest possible reactor only a minimum of this material should be used. Therefore it is desirable to ~~minimise~~ minimize the necessary thickness of the basket by having it to withstand only the

absolute necessary pressure difference, whereas the main pressure shell is designed for the full internal pressure, however, at a much lower temperature.